REMARKS

This Amendment is responsive to the Final Office Action dated March 5, 2004. All rejections and objections of the Examiner are respectfully traversed. Reconsideration is respectfully requested.

At paragraph 1 of the Office Action, the Examiner objected to the claim of priority at the beginning of the Specification for certain informalities. Amendments to the Specification are respectfully believed to meet all requirements of the Examiner in this regard. In addition, included herewith are copies of the originally filed Declaration, as well as a copy of a Preliminary Amendment indicating particulars of the priority document. Applicant respectfully notes that the filing date of the provisional patent application 60/204,037 should be February 22, 2000, as confirmed in a telephone conversation with Examiner Leung. Applicant is thankful for the Examiner's help in this regard. If anything further is needed to complete the priority claims, Applicant will provide it upon request.

At paragraphs 3 and 4 of the Office Action, the Examiner rejected claims 8 and 13 for indefiniteness under 35 U.S.C. 112, second paragraph. Amendments to the claims are respectfully believed to meet all requirements of the Examiner in this regard.

At paragraphs 5 and 6 of the Office Action, the Examiner rejected claim 13 as being anticipated under 35 U.S.C. 102 by United States patent number 6,532,088 of Dantu et al. ("Dantu et al.") Applicant respectfully traverses this rejection.

Dantu et al. discloses a system for packet routing in fiber optic rings making up working and protection paths. A central node in the Dantu et al. system stores a route table and provides forwarding tables and updates to a number of forwarding nodes. As described by Dantu et al., the forwarding tables for the protection and working paths provide for path routes and forwarding for the packets on a packet by packet basis. See Abstract.

Dantu et al. further teach that multi-protocol label switching (MPLS) may be used to specify forwarding in the network, in which logical path definitions are specifically used to direct data packets in the fiber optic ring network. Dantu et al. also disclose the assignment of labels to data packets in a way that causes packets to be transmitted on the protection path whenever

the central node determines that a failure has occurred. See column 8, lines 46 through 51, and column 9, lines 8 through 15.

In connection with the creation of forwarding tables by the central node for the forwarding nodes, Dantu et al. describe using MPLS to specify a one-to-one mapping between logical channels. As described by Dantu et al., each logical channel has a unique channel ID known as a label. Each data packet using such an MPLS approach in the Dantu et al. system is assigned such a label. These labels consisting of unique channel IDs are described by Dantu et al. as implicitly representing an output port, a carrier frequency and a time slot and potentially also a quality of service rating delineating a specific application or application type or a specified customer. See column 11, lines 24 through 39. Dantu et al. go on to describe one to one label mapping in the forwarding table, in which corresponding labels identify logical channels on which received data packets are to be transmitted. In this way, by their identification of logical channels, the labels in the Dantu et al. system define a ring to be used, the frequency and the time slot in which the forwarded data packet is to be transmitted. See column 13 line 61 through column 14 line 4. Whenever a data packet is received, the node examines the contents of the forwarding table in relation to specific information within or known about the received user traffic. As described in Dantu et al., the label within the header of the received packet corresponds to a label within the routing table. See column 14, lines 46-54.

Nowhere in Dantu et al. is there disclosed or suggested any network communication system including:

> means for defining a datapath between the source node and the sink node, the datapath being represented as a sequence of labels, each label identifying a portion of the datapath between a pair of nodes in the datapath, and ***each label also including a value of a communication attribute of the portion of the datapath identified by the label, the communication attribute selected from a group consisting of wavelength, frequency, shim and time slot, and wherein a wavelength field in each label is used for storing the value of the communication attribute for the portion of the datapath identified by the label.*** (emphasis added)

As in the present claim 13. In contrast, Dantu et al. disclose using *labels that identify logical channels* on which packets are conveyed. Dantu et al. expressly describe the use of

unique channel IDs as labels, thus teaching away from any system or method for label switching based on labels that include *values of communication attributes*, as in the present claim 13.

For the above reasons, Applicant respectfully urges that Dantu et al. do not disclose or suggest all the features of the present claim 13. Accordingly, Applicant respectfully urges that Dantu et al. do not anticipate the present claim 13 under 35 U.S.C. 102.

At paragraphs 7-10, the Examiner rejected claims 1-12 under 35 U.S.C. 103, again citing Dantu et al. , in combinations with United States patents 6,501,754 B1 of Ohba et al. ("Ohba et al."), 5,938,909 A of Taylor ("Taylor"), and 6,556,544 B1 of Lee ("Lee"). Applicant respectfully traverses these rejections.

Ohba et al. disclose a label switched path loop detection method which are capable of efficiently detecting a label switched path loop. Ohba et al. teach a system that includes transmitting a label allocation message requesting a set up of a label switched path that includes information regarding an ingress and an egress node for the path. Taylor discloses a system including optical demodulators configured to separate information from an optical signal into multiple information streams, each having different data rates, and place the information into multiple optical channels within a wave division multiplexed system. Lee discloses a system for provisioning a dynamic multicast group over a differentiated services network, including a constrained routing distribution protocol. The relevant teachings of Dantu et al. are set forth above with regard to the rejection under 35 U.S.C. 102.

Nowhere in Dantu et al., Ohba et al., Taylor, and/or Lee, taken either independently or in combination, is there disclosed or suggested any system or method for label-switching routing in a multi-protocol label switching (MPLS) optical communications network, including:

> establishing a datapath as a sequence of labels between a source and a sink in said optical communications network, ***wherein each label includes a wavelength field storing a value of a wavelength frequency to be used for communication over a corresponding portion of the datapath associated with the label,***
>
> ***converting a first wavelength field of a first label to a second wavelength of a second label and forwarding the traffic to said sink according to said datapath,*** including updating the sequence of labels to replace the first label with the second label . . . (emphasis added)

As in the present independent claim 1. Independent claim 8 includes analogous features. None of Dantu et al., Ohba et al., Taylor, and/or Lee provide any hint of even the desirability of using labels that include values of wavelength frequencies for the corresponding datapath portions, as in the present independent claims 1 and 8. As noted above, Dantu et al. describe using logical channel IDs for labels. Ohba et al. describe using input and output side labels consisting of "link ID, label" components (Fig. 17). Taylor includes no mention of the make-up of any labels, and Lee refers to labels just in the general context of label distribution.

For the above reasons, Applicant respectfully urges that the cited combinations of Dantu et al. do not disclose or suggest all the features of the present independent claims 1 and 8. Accordingly, the cited combinations do no constitute a *prima facie* case of obviousness under 35 U.S.C. 103 with respect to claims 1 and 8. As to claims 2 through 7 and 9 through 12, they each depend from either claim 1 or claim 8, and are respectfully believed to be patentable over the cited combinations for at least the same reasons. Reconsideration of all pending claims is respectfully requested.

In view of the above Applicant respectfully believes that all pending claims are allowable, and the application is in condition for allowance. Applicant respectfully requests that the objections and rejections be withdrawn.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone David A. Dagg, Applicant's Attorney at 978-264-6664 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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